STATEMENT OF WORK (SOW)
SYSTEM WIDE INFORMATION MANAGEMENT TECHNICAL SERVICES BRIDGE CONTRACT

C.1. INTRODUCTION

C.1.1. Organization and Address

Office of ATC Communications
Technical Operations Services (ATO-W)
System Wide Information Management (AJW-57)
800 Independence Avenue, SW
Washington, DC 20591

This SOW provides the Office of ATC Communications (ATO-W) with the resources necessary to support the Systems Wide Information Management (SWIM) program.

C.1.2. Overview

This SOW describes the effort required to support and further develop the SWIM program architecture, requirements and implementation planning. The vendor providing the services will not be allowed to compete as a prime or subcontractor for any later contract to acquire technology based upon the requirements developed under this procurement.

C.2. PROJECT BACKGROUND AND OBJECTIVES

C.2.1. Background

System Wide information Management (SWIM) will modernize the NAS into a NAS-wide information system that supports Next Generation Air Transportation System (NextGen) goals. The transformation to NextGen requires programs and technologies that provide more efficient operations, including streamlined data communications capabilities. SWIM is an integral part of that transformation.

SWIM was introduced to improve information interoperability and management for diverse NAS system platforms across multiple operational domains (e.g., Traffic Flow Management, En Route, Terminal, Surveillance, and Weather). SWIM will provide a Service Oriented Architecture (SOA) environment for stepwise migration to NextGen. SWIM obtained a Final Investment Decision in June 2007. The program is currently developing and refining requirements and architectural designs for the SWIM system. To advance the program, the SWIM Program Office requires programmatic and technical support for engineering activities associated with developing and evaluating operational concepts; requirements; architectures; strategic planning; value and performance measurement; and related activities. This support will ensure consistency across FAA operational domains in the identification, specification, and development of capabilities that improve NAS interoperability while furthering SWIM goals (e.g., a managed progression of capabilities toward net-centricity). These tasks include direct support to the SWIM Program Office and other stakeholders including ATO-P Systems Engineering at FAA Washington D.C. Headquarters and the William J. Hughes Technical Center in Atlantic City, New Jersey, SWIM Implementing Programs (SIPs) and Communities of Interest (COI) and other FAA Lines of Business.

C.3. TECHNICAL SERVICES REQUIRED

C.3.1. Objectives

This project will be led by the SWIM program office (PO). The objectives of the SWIM PO under this requirement are to obtain:

1. Technical and managerial skills for the SWIM PO in order to execute the program;
2. Systems engineering information for the SWIM PO that will allow it to optimize technical decisions and resources as the program is executed; and
3. Assistance in creating the formal documentation and processes needed for effective program management.

C.3.2. Task Description

The Contractor must support the SWIM program with the targeted objectives identified in Para. 3.1. above. The SWIM program office expects its objectives to be met through the work and deliverables specified in the sections that follow.

C.3.3. Scope of Work

The Contractor shall provide SWIM program management and systems engineering technical support to the SWIM Program Office. The Contractor shall perform specific requirements in accordance with the SWIM Work Breakdown Structure (WBS) provided to the Contractor as GFI. Representative tasks to be performed under this contract are set forth in Attachment J.6. This WBS establishes the SWIM baseline in support of the Final Investment Decision. The Contractor shall track its performance in accordance with the SWIM WBS and report it monthly in the monthly Program Status Report (CDRL #A001) and shall ensure that the requirements set forth in this SOW are met. To further develop and implement SWIM in support of NextGen, the Contractor shall perform a broad array of requirements consistent with the following support categories.

C.3.4. Requirements

The contractor is required to complete the following requirements:

C.3.4.1. Requirement 1 - Program Management

The program lead shall be prepared upon reasonable notice, to present and discuss with contracting officer technical representative (COTR) or designated representative the status of contract activities. The Contractor must provide quality assurance to all deliverables. Under this task, the Contractor shall provide the following:

1. Program Status Reports, which includes a narrative describing, progress, issues, action items, risks, updates and revisions to the task order project plan activities, milestones, and deliverables. (Program Status Report (CDRL #A001)
2. Earned Value Management (EVM) data to be provided using the FAA provided template. The Contractor shall provide notification of hours expended during the reporting month by major SWIM WBS categories. (CDRL#A002)

The contractor shall execute the SWIM configuration management (CM) plan. The CM plan defines management structures and processes for identifying, tracking, monitoring, reporting, and auditing changes to the architecture products. The Contractor shall place SWIM products under configuration management.

C.3.4.2. Requirement 2 - Provide Systems Engineering Support

The Contractor shall assist the SWIM PO with the execution of the SWIM Systems Engineering Management Plan (supplied as GFI). The Contractor shall employ standard systems engineering processes to conduct tasks. The Contractor shall exercise knowledge of NAS familiarity, Service Oriented Architecture (SOA) expertise, middleware technologies, software programming, and familiarity with 2167 software development standards to support SWIM requirements development and system implementation.

The Contractor shall provide standard systems engineering (SE) processes and procedures to support the SWIM program office.

The Contractor shall assist in the establishment of engineering processes to monitor, control, and oversee SWIM engineering activities. Support includes, but is not limited to:

1. Design and develop engineering processes to support SWIM programmatic and technical activities
2. Support the implementation, institutionalization, and adoption of engineering processes among SWIM stakeholders
3. Assess, implement, deploy, and administer automated tools that facilitate engineering activities

The Contractor shall assist with NAS integration engineering and analysis, including but not limited to:

1. Integration support to SWIM Implementing Programs (SIPs)
2. Service definition and registration
3. Interface definitions and application integration mechanisms
4. Transition issue identification and resolution

The Contractor shall assist with engineering and analysis associated with design and implementation of the SWIM infrastructure and SWIM core services. The Contractor shall develop and distribute as required technical briefings, white papers and reports, shall be developed and distributed to exchange technical knowledge.

The Contractor shall attend requirements reviews, design reviews, attend Technical Interchange Meetings and informal meetings. The Contractor shall actively provide and facilitate technical information exchange with the SWIM program office, SIPs, WJHTC personnel and other stakeholders as directed.

C.3.4.3. Requirement 3 - Requirements and Architecture ocumentation Development

The Contractor shall assist with concept and requirements development, validation, analysis and documentation, including but not limited to:

1. SWIM and Core Capabilities concepts and requirements, segment capability concepts research and development
2. The contractor shall conduct technical reviews and assist with the development of and provide analysis, comments, updates and recommendations to SWIM engineering artifacts development and maintenance for all SWIM segments, including but not limited to:
    a. Concept of Use
    b. Concept of Operations
    c. SWIM Final Requirements Document (fRD) with Appendices
    d. SWIM Service Specification Documentation (SvSD)
    e. Review SIP Engineering Artifacts
    f. SWIM Interface Control Document (ICD)
    g. SWIM Interface Requirement Document (IRD)
    h. Core Services Standards

The Contractor shall assist with functional, physical, data and enterprise architecture analysis and development for all SWIM segments, including but not limited to:

1. Architectural element definition (e.g., conceptual data models, taxonomies, SOA technologies and standards, OMB-required architecture views)
    a. SWIM Architecture Documents
    b. Core Service Architecture Definition
    c. Segment Use Cases development and updates
    d. Architecture case studies
2. SWIM NAS Enterprise Architecture Views
3. NAS/NextGen Enterprise Architecture impact analysis and studies
4. Operational Improvement Roadmap analysis
5. Telecommunications Considerations

The Contractor shall assist with the development of the draft registry interface requirements document. The Contractor shall assist with the development and update of SWIM security plan and conduct a roadmap security analysis.

The Contractor shall attend requirements team meetings and reviews, design reviews, Technical Interchange Meetings and informal meetings. The Contractor shall actively provide and facilitate technical information exchange with the SWIM program office, SIPs, WJHTC personnel and other stakeholders as directed.

C.3.4.4. Requirement 4 - SWIM Implementation

The Contractor shall assist the SWIM PO with the execution of the SWIM Implementation Plan and the SWIM Laboratory Plan (GFI).

The contractor shall develop, manage and support trade studies and prototype development plans and procedures for SWIM Commercial Off The Shelf (COTS) selections. The contractor shall provide engineering and analysis, including but not limited to:

1. Trade Study and Prototype Support Definitions
2. Development of Acquisition Documents
3. Participation in Acquisition Activities including Evaluation Team participants
4. Development of Plans and Reports
5. Evaluation of Laboratory Testing
6. Execution of Trade Study
7. Execution of Prototype Development
8. Provide Software Development and Support
9. Document Process, Progress, Results and Recommendations
10. SWIM Implementing Programs Coordination
11. Conduct Integration and interface testing and evaluation
12. Assist with setting up enterprise licenses.

The Contractor shall provide technical expertise to support acquisition tasks associated with COTS procurement in support of core service development. The Contractor shall leverage knowledge gained from past COTS acquisition, testing and evaluation to assist with additional COTS evaluations to include but not limited to XML gateway, policy server and registry repository acquisitions. The Contractor shall assist with the technical evaluation of responses to FAA solicitation including qualified vendor listings. The Contractor shall prepare and assist with the technical components of the appropriate RFP sections for COTS procurement(s) to include development to implementation requirements.

The Contractor shall provide technical advisors to support SWIM evaluation teams. The Contractor shall assist with testing and technical evaluation activities. The Contractor shall capture and report lessons learned at each major task. The Contractor shall provide written comments, items for clarifications and technical inputs to briefings and presentations.

The Contractor shall review and provide technical comments, recommendation and enhancements to SWIM products developed by the SWIM Implementing Programs (SIPs) to include ITWS, CIWS, ERAM, TFM, AIM, WMSCR and other stakeholders (e.g. FAA Telecommunications Infrastructure program requirements). The Contractor shall also assist with the oversight efforts of SIPs SWIM capabilities to ensure that requirements are defined and implemented.

The Contractor shall review and provide technical comments and recommendations to technical plans and reports for the Terminal Data Distribution System (TDDS). The Contractor shall also participate in designated TDDS reviews and meetings.

The Contractor may conduct training presentations on specific architecture considerations or software products as required. These presentations will familiarize team members with the content of the SWIM elements.

The Contractor shall attend and support implementation team meetings and reviews, design reviews, Technical Interchange Meetings, SIPs coordination and review meetings and other informal meetings. The Contractor shall actively provide and facilitate technical information exchange with the SWIM program office, SIPs, WJHTC personnel and other stakeholders as directed. The Contractor shall make use of the SWIM Wiki to share technical knowledge. The SWIM PMO will provide access.

The Contractor shall support the activities designated in the SWIM Laboratory Plan to include participating in all SWIM test and evaluation activities conducted in the SWIM Prototype Facility and SWIM Integration Facility located at the WJHTC in Atlantic City, New Jersey. Support includes witnessing testing, managing or conducting trade studies, performing evaluations and integration of COTS product during acquisition, prototyping and implementation act ivies. The Contractor shall recommend implementation strategies based on evaluations and will assist with the development of approved product listings.

C.3.4.5. Requirement 5 - Support Strategic Planning and Governance

The Contractor shall provide technical and management support to develop strategic plans to define SWIM implementation of governance. The Contractor shall conduct technical assessments and document results. The Contractor shall use the results of this assessment to recommend SWIM roadmaps for increasing the maturity of the SWIM program.

The Contractor shall assist in the analysis, development and management of SWIM policy and guidance including but not limited to:

1. Roles, responsibilities and artifact requirements among major stakeholders
2. SWIM Segment (s) strategic planning and analysis
3. SWIM Segment (s) capability selection criteria and value analysis
4. SWIM program development and implementation strategy development
5. Governance Plan for developing, maintaining and using SWIM. This governance plan should consider a federated SWIM approach to address the relationships between the SWIM and the SIPs. The governance plan should include
   a. description of the SWIM governing bodies or individual roles,
   b. responsibilities for each governing body or individual role,
   c. description of the governance lifecycle, i.e., the process by which governance decisions are made, and

d. relationship between the SWIM governance process and those for related IT governance bodies, e.g., data management, service-oriented architecture, or others.

6. The contractor shall develop and coordinate the adoption of IT principles. IT principles combined with a commitment to enforce them, helps drive enterprise-wide change consistently across disparate organizational units and processes, projects and infrastructure, and the solutions that support them.
7. The Contractor shall assist with the development of the COTS product management plan.
8. The Contractor shall support the generation of the SWIM Resource Kit for engineering.

C.3.5. Travel

Travel may include trips to Atlantic City, New Jersey and conference locations as appropriate. Travel will be reimbursed on a cost basis, if reasonable and allowable, in accordance with FAA policy as set forth in AMS.

C.3.6. Deliverables and Due Dates

The Deliverables due under this contract are set forth in Paragraph J.2

C.4. GOVERNMENT FURNISHED INFORMATION

FAA will purchase the required software licenses for COTS software, if required, for use by FAA and Contractor personnel.

C.4.1. Information Sources

FAA Government Furnished Information (GFI) will be located on the SWIM KSN site or the SWIM website (unless otherwise noted below) and include the following:

- Access to the FAA SWIM Website www.swim.gov
- Access to the SWIM KSN site
- Access to the SWIM Wiki
- SWIM WBS
- SWIM Program Network Logic Schedule
- SWIM Document Template
- SWIM WBS Category Template for EVM
- SWIM Requirements Management Plan
- SWIM Systems Engineering Management Plan
- SWIM Implementation Plan
- SWIM Laboratories Plan
- SWIM configuration Plan
- FAA Directory of Plans website at http:--www.apo.data.faa.gov-dirplans-.
- Publicly accessible FAA information on the internet at http:--www.faa.gov.

C.4.2. Documentation

Copies of GFI documents may be obtained from the Federal Aviation Administration, Headquarters Public Inquiry Center APA-230, 800 Independence Avenue SW, Washington, D.C. 20591, 202-267-3484. Requests should fully identify material desired and cite the solicitation or contract number.